

## **REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following commentary.

### **I. Status of the Claims**

Claims 1 and 6 have been amended for better clarity, with exemplary support in the specification, at page 2, lines 5-6; at page 38, lines 11-15 and 26-28; at page 40, lines 2-10; and in the paragraph bridging pages 40 and 41. Claims 1, 4 and 9 have been amended to limit to the elected species. Claims 2, 3, 5, and 10 were cancelled previously. Claims 7 and 8 are cancelled in this response without prejudice or disclaimer.

Applicants acknowledge the finality of the Office Action. Because no additional search is required, and because the amendments place the application in condition for allowance or at least in better condition for appeal, Applicants respectfully request entry of this amendment. Upon entry, claims 1, 4, 6, 9, and 11-15 will be pending, with claims 11-13 withdrawn.

### **II. Statement of the Substance of the Interview**

Applicants thank Examiner Vinod Kumar for the courtesies extended during an interview with Applicants' representative, Yang Tang, on March 6, 2008.

During the interview, the patentability issues affecting the present application were discussed. Examiner Kumar indicated that he would consider further claim amendments and arguments upon submission of the same. In particular, Examiner Kumar commented that to distinguish over the prior art, the claims must recite the distinguishable features in the method step(s), not only in the preamble.

The rejection under section 112, first paragraph was also discussed. Examiner Kumar indicated that he would consider additional arguments in support of enablement and written description. Examiner Kumar suggested that Applicants should focus on overcoming the prior-art rejection first.

### **III. Claim Objections**

The Examiner objects to claims 7 and 8 for allegedly failing to further limit the base claim. Claims 7 and 8 are cancelled, thereby rendering the issue moot.

The Examiner objects to claims 1, 4, and 7-9 for containing non-elected SEQ ID NOs or non-elected subject matter. Claims 7 and 8 are cancelled thereby mooting the objection. Claims 1, 4 and 9 have been amended to delete non-elected SEQ ID NOs or subject matter. Accordingly, the claim objections should be withdrawn.

### **IV. Rejection of Claims under 35 U.S.C. §112, first paragraph**

The Examiner rejects claims 4 and 9 for alleged lack of enablement and written description. Applicants respectfully traverse the rejection.

Specifically, the Examiner contends that the specification does not provide enablement for a DNA sequence less than 100% sequence identity to SEQ ID NO: 1 and that making the amino acid changes in SEQ ID NO: 2 is unpredictable. See final Office Action, page 4, last full paragraph, and the paragraph bridging pages 5 and 6.

Applicants respectfully disagree, because DNA and proteins of DREB family were well studied at the time of the invention. Furthermore, the application presents drawings to align the sequences of DREB proteins. The specification also discloses the interchangeable residues at the specific positions in the DREB proteins and DNA sequences and their significance. See specification, the paragraph bridging pages 26 and 27 through the paragraph bridging pages 30 and 31. Informed by the specification and the contemporaneous state of the relevant art, therefore, a skilled person in the art would have known which residues and cognate nucleotides, respectively, could be altered without abrogating DREB protein activity.

Moreover, the specification provides adequate written description for a DNA comprising a nucleotide sequence that is at least 94% homologous with the nucleotide sequence represented by SEQ ID NO: 1. For example, the DNA and amino acid sequences of DREB family members are aligned in the drawings. The specification further describes the specific segments of amino acid sequences that are

conserved among DREB proteins. See, for example, the paragraph bridging pages 22 and 23, and the paragraph bridging pages 24 and 25. Therefore, the specification provides sufficient guidance to obtain a DNA comprising a nucleotide sequence that is at least 94% homologous with SEQ ID NO: 1 and encoding a protein that retains the activity of binding to a stress-responsive element and regulating the transcription of a gene located downstream of the element.

Accordingly, the specification satisfies the written description and enablement requirements of section 112. Applicants respectfully request withdrawal of the rejection.

**V. Rejection of Claims under 35 U.S.C. §102(b)**

The Examiner rejects claims 1, 4, 6-9 and 14 for alleged anticipation by Kasuga *et al.*, *Nature Biotechnology* 17: 287-291. 1999 ("Kasuga"). Claims 7-8 are cancelled thereby mooted the rejection. Applicants respectfully traverse the rejection of the remaining claims.

The claimed invention is directed to a transformed plant that has (i) improved propagation efficiency *of scions*, (ii) improved propagation efficiency and rooting efficiency *of scions*, or (iii) improved propagation efficiency *of scions* and prolonged vase life *of cut flowers*, relative to a plant that is not transformed, and a method of producing the transformed plant. Amended claim 1 explicitly recites a selecting from among regenerants of transformed plant material, based on at least one of (i), (ii) and (iii), thereby to obtain a plant with improved features.

Kasuga does not even hint at such a selection step. To the contrary, the reference discloses making a transformed Arabidopsis, which is a seed-propagated plant and not obtainable by means of scions. Accordingly, nothing about Kasuga could have placed the knowledgeable reader in possession of a transformed plant having improved scion-propagation efficiency or improved scion-rooting efficiency, as presently recited, or of a method, as claimed, for making a transformed plant.

Moreover, as demonstrated in Exhibit A, a photograph of Arabidopsis having flowers, Arabidopsis is a fragile plant that has no value as an ornamental plant. Therefore, it is not surprising that Kasuga fails to teach a transformed plant that has prolonged vase life of cut flowers.

Accordingly, because Kasuga does not teach each and every element to anticipate the Applicants' claimed invention, withdrawal of the Section 102(b) rejection is warranted.

**VI. Rejection of Claims under 35 U.S.C. §103(a)**

The Examiner rejects claim 15 for alleged obviousness over Kasuga in view of Dalton *et al.*, *Plant Science* 132: 31-43, 1998 ("Dalton"). Applicants respectfully traverse the rejection.

The teachings of Kusuga are discussed above. Dalton is cited for its alleged teaching of silicon carbide whisker-mediated plant transformation. Because Dalton does not compensate for the deficiencies of Kusuga, the combined teachings of the cited references fail to render claim 1 obvious. Claim 15, which depends from a non-obvious base claim, is non-obvious as well.

**CONCLUSION**

Applicants submit that the present application is in condition for allowance, and they request an early indication to this effect. Examiner Kumar is invited to contact the undersigned directly, should he feel that any issue warrants further consideration.

The Commissioner is hereby authorized to charge any additional fees, which may be required under 37 CFR §§ 1.16-1.17, and to credit any overpayment to Deposit Account No. 19-0741. Should no proper payment accompany this response, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If any extension is needed for timely acceptance of submitted papers, Applicants hereby petition for such extension under 37 CFR §1.136 and authorize payment of the relevant fee(s) from the deposit account.

Respectfully submitted,

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EXHIBIT A

Photograph of Arabidopsis

